# Natural Fuels Photo Series Tutorial

# INSTRUCTOR'S GUIDE

To effectively teach students how to use the photo series, you will need to fully understand how to use photo series yourself by reviewing the tutorial and by using the published photo series volumes in a field setting.

To download and/or view the Natural Fuels Photo Series tutorial, please visit:

http://www.fs.fed.us/pnw/fera/products/software_tutorials.html

Tutorial: The Natural Fuels Photo Series tutorial is intended to be viewed individually by students online, or downloaded to a personal computer and viewed offline. You may wish to incorporate the tutorial as a pre-course assignment or classroom exercise.

Student Workbook: A student workbook is available on the tutorial webpage; the workbook contains an introduction to the Natural Fuels Photo Series followed by each page of the tutorial with space provided for student notes.

Demonstration: A short Microsoft PowerPoint® presentation on using the Natural Fuels Photo Series is available for downloading on the tutorial webpage. You may wish to tailor the presentation with examples from your region.

To order any of the 11 photo series volumes for the United States, please visit our webpage at:

http://www.fs.fed.us/pnw/fera/photoseries.html

## INTRODUCTION TO THE NATURAL FUELS PHOTO SERIES

Ground inventory procedures that directly measure site conditions such as fuel loading and arrangement, vegetation structure, and composition exist for most ecosystem types and are useful when a high degree of accuracy is required. However, ground inventories are time consuming and expensive. Photo series can be use to make quick, easy, and inexpensive determinations of fuel quantities and vegetation conditions when less precise estimates are acceptable.

### About the Natural Fuels Photo Series

The Natural Fuels Photo Series currently includes eleven volumes representing various regions of the United States and one volume from Brazil. There are one to four series in each volume, each having four to seventeen sites. Sites include standard, wide-angle, and stereo-pair photographs. Each group of photos includes inventory data summarizing vegetation composition, structure, and loading; woody material loading; density by size class, forest floor depth and loading; and various other site characteristics.

Photo series are important land management tools that can be used to ecologically assess landscapes through appraisal of fuels (i.e., living and dead woody material and vegetation biomass) and site characteristics. Once an ecological assessment has been completed, fuel treatment options such as prescribed fire, thinning or biomass removal can be planned and implemented to better achieve desired effects while minimizing negative impacts on other resources.

The photo series is useful in several branches of natural resource science and management. Inventory data such as these can be used as inputs for evaluating vegetation assemblages, animal and insect habitat, nutrient cycling, and microclimate. Fire managers will find these data useful for predicting fuel consumption, smoke production, fire behavior, and fire effects during wildfires and prescribed fires. In addition, the photo series can be used to appraise carbon storage, an important factor in predictions of future climate, and to link remotely-sensed signatures to live and dead fuels on the ground.

The Natural Fuels Photo Series continues to evolve and grow as land managers, researchers, and policy-makers identify ecosystems for which vegetation and fuel inventory data are needed. Future volumes are planned for the Northeast (Red spruce and balsam fir, pitch pine, pitch pine scrub, and mixed hardwoods); Southwest (Juniper and oak woodlands of the borderland region); Montana (Juniper and shrublands of the Missouri Breaks region); and Mexico (pine and oak).

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